INDEX

Petroleum Refiner, 1942...Volume 21

☆

Development, Technology, Processing and Plant Operation for Petroleum Refining and Natural Gasoline Manufacture

Absorption — Page

Automatic Control of Absorption Oil Flow Improves Plant Recovery....Sept. 271

Acetylene

Are You Wasting Oxyacetylene?....June 88
G. V. Slottman

Acrylonitrile

Storage and Handling of Butadiene, Isobutylene, Styrene, and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Robert M. Stuchell

Alkylation

Continental Plant Designed for Flexible Operation....Jan. 1
Problems in Alkylation Plant Operation....July 193
L. M. Kenny
Hydrocarbon Chemistry for the Refinery Worker....Aug. 227
Paul H. Faust

American Chemical Society

Abstracts of Papers Before Division of Petroleum Chemistry of the American Chemical Society....Sept. 130

American Petroleum Institute

Summary of API Hydrocarbon Research Project....Nov. 371
Cecil E. Boord
The Physical Constants of Some Hydrocarbons in the Gasoline Boiling Range....Nov. 372
Cecil E. Boord
Method for Analyzing the Gasoline Fraction of Petroleum, with Preliminary Results on East Texas and Oklahoma Crudes....Nov. 377
Frederick D. Rossini, Beveridge J. Mair, Alphonse F. Forziati, Augustus R. Glasgow, Jr., and Charles B. Willingham
Synthesis and Properties of Hydrocarbons of High Molecular Weight....Nov. 383
R. W. Schiessler, J. N. Cosby, D. G. Clarke, C. S. Rowland, W. S. Sloatman and C. H. Herr
Thermofor Catalytic Cracking Process....Nov. 401
T. P. Simpson, L. P. Evans, C. V. Hornberg and J. W. Payne
Critical Analysis of Sweetening Processes and Mercaptan Removal....Nov. 406
John Happel, S. P. Cauley and H. S. Kelly
Natural Gas and Natural Gasoline in the War Effort....Nov. 414
E. Holley Poe
Corrosion Protection of Storage Tanks....Nov. 417
F. L. Newcomb, C. F. Kelly and E. S. Dixon
Looking Forward in Refining....Nov. 434
Bruce K. Brown
Wartime Plant Design....Nov. 436
Max B. Miller
Synthetic Chemicals from Natural Gas....Nov. 136
Dr. Gustav Egloff
Chemistry of Synthetic Rubber....Nov. 144
Speakers Before API Praise Free Enterprise Status....Nov. 152
All API Officials Are Re-elected at Chicago....Nov. 156

Ammonia

Natural Gas as a Raw Material in the Production of Synthetic Ammonia....Mar. 63
Frank H. Dotterweich
Reduction of Metallic Ores by Natural Gas....May 135
Frank H. Dotterweich

Analytical

Defense Effort Push Oil to Record Levels During 1941....Jan. 82
William R. Boyd, Jr.
Liquefied Petroleum Gas....Feb. 98
G. G. Oberfell
Oil in the War, a Balance Sheet Study to Show Whence We Have Come and Whither We Go....Aug. 97
Petroleum's War Products....Oct. 117
The Refinery of the Future....Oct. 305
Wright W. Gary
Where the Small Plant Fits In....Oct. 369
Looking Forward in Refining....Nov. 435
Bruce K. Brown

Aromatization

Investigation of the Aromatic Portion of Light Oil Fractions....Mar. 78
E. A. Robinson

Asphalt

Vacuum Recovery of Penetration Asphalt....Apr. 122
Asphalt Paving Emulsion Properties, Uses and Tests....Aug. 232
Edwin J. Barth

Aviation Gasoline

The Role of Blending in Production of Aviation Motor Fuel....Jan. 9
E. S. Bissell
Post-War Gasoline....Oct. 349
Graham Edgar

Aviation Lubricants — Page

Established Processes Make Aviation Lubricants....Oct. 343
George F. Fitzgerald

Baruch Committee Report

Rubber Administrator to Follow Committee Recommendations....Oct. 294

Bibliography

Bibliography of Synthetic Rubber References to American Publications....Oct. 335
Bradford A. Osborne

Blending

The Role of Blending in Production of Aviation Motor Fuel....Jan. 9
E. S. Bissell

Boiler Plant

Boiler Plant Operation and Care....Dec. 451
Roy W. Machen

Bomb Protection

Fire Bombs, Their Action and Control....Apr. 96
Joe L. Rhinger

Bubble Plates

Multicomponent Distillation....June 182
C. D. Shiah

Butadiene

Synthetic Rubber . . . Problem and An Opportunity....Mar. 68
J. V. Hightower
Butadiene Calls for Few Departures in Equipment or Processing....Apr. 101
J. V. Hightower
Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Robert M. Stuchell
Synthetic Rubber and the Petroleum Industry....Oct. 289
Dr. M. B. Hopkins
Houdry Catalytic Butadiene Process....Oct. 359
Adaptation of Thermal Cracking to Butadiene Manufacture....Oct. 365

Butane Recovery

Conditioning Raw Natural Gasoline in the Field....Apr. 112
Importance of Butane in This War....May 127
R. L. Huntington
Butane Requirements Demand Efficient Extraction....May 143
Roy W. Machen
Increasing Recovery of Liquefied Petroleum Gases in Natural Gasoline Plants....June 176
J. W. Wilson

Catalysis

Thermofor Catalytic Cracking Process Announced....June 162
J. V. Hightower
Notes on the Conversion of California Residuum....Sept. 269
Robert F. Naeve
Houdry Catalytic Butadiene Process....Oct. 359
Thermofor Catalytic Cracking Process....Nov. 401
T. P. Simpson, L. P. Evans, C. V. Hornberg and J. W. Payne

Catalytic Cracking

Thermofor Catalytic Cracking Process....Nov. 401
T. P. Simpson, L. P. Evans, C. V. Hornberg and J. W. Payne

Chemical Analysis

Hydrocarbon Structure of Petroleum Is Complex....Sept. 257
A. W. Trusty
The Physical Constants of Some Hydrocarbons in the Gasoline Boiling Range....Nov. 372
Cecil E. Boord
Method for Analyzing the Gasoline Fraction of Petroleum with Preliminary Results on East Texas and Oklahoma Crudes....Nov. 377
Frederick D. Rossini, Beveridge J. Mair, Alphonse F. Forziati, Augustus R. Glasgow, Jr., and Charles B. Willingham
Synthesis and Properties of Hydrocarbons of High Molecular Weight....Nov. 383
R. W. Schiessler, J. N. Cosby, D. G. Clarke, C. S. Rowland, W. S. Sloatman and C. H. Herr
Chemical Utilization of Natural Gas and Natural Gasoline Hydrocarbons by Oxidation....Dec. 439
Hooper Linford

Chemical Processing

Natural Gas as a Raw Material in the Production of Synthetic Ammonia....Mar. 63
Frank H. Dotterweich

Chemical Reactions

Hydrocarbon Chemistry for the Refinery Worker....Aug. 227
Paul H. Faust

Chromium

Role of Chromium in Steels for Cracking-Still Tubes....June 159
C. L. Clark

Page

Clay Treating
Pilot Plant Study of the Gray Clay Treating Process.....Dec. 447
Dr. A. W. Cobb and L. Carlson

Combustion
More Steam with Minimum Materials.....Sept. 265
Pell W. Foster, Jr.

Compounding
Three Industries Combine Knowledge and Technique to Provide Synthetic Rubber.....Oct. 361
R. P. Dinsmore

Compression Ratios
Post-War Gasoline.....Oct. 349
Graham Edgar

Compressors
Installation and Servicing of Pumps and Compressors in Refining Service.....Dec. 455
J. F. Rollins

Condensation
Condensation Combined with Water Treating.....May 131
Increasing Production With Clean Condensers.....Aug. 243
C. L. Wedell and W. B. Borst

Construction
Wartime Plant Design.....Nov. 436
Max B. Miller

Control Equipment
Installation and Maintenance of Control Equipment.....July 103
E. H. Alexander

Cooling
Increasing Production With Clean Condensers.....Aug. 243
C. L. Wedell and W. B. Borst

Corrosion
Increasing Production With Clean Condensers.....Aug. 243
C. L. Wedell and W. B. Borst
Laboratory Control Reduces Refinery Corrosion.....Aug. 250
A. W. Trusty
Corrosion Protection of Storage Tanks.....Nov. 417
F. L. Newcomb, C. F. Kelly and E. S. Dixon

Corrosion Prevention
Tube Corrosion Held to a Minimum by Continuous Check on Dehydrator Water pH.....Jan. 16
J. F. Pfarr and H. A. Blackstone

Cracking
Continental Plant Designed for Flexible Operation.....Jan. 1
Notes on the Conversion of California Residuum.....Sept. 269
Robert F. Naeve

Cracking Still Tubes
Role of Chromium in Steels for Cracking-Still Tubes.....June 159
C. L. Clark

Cracking Catalytic
Thermofor Catalytic Cracking Process Announced.....June 162
J. V. Hightower
Houdry Catalytic Butadiene Process.....Oct. 359

Cracking-Thermal
Adaptation of Thermal Cracking to Butadiene Manufacture.Oct. 365

Cracking Unit Operations
Revised Cracking Technique Increases Octane Rating of Michigan Distillate.....Feb. 43

Decoking
Decoking Petroleum Residues.....Feb. 31
Judson S. Swearingen, Morris R. Morrow and Bruce Jones

Dehydration
Hydrocarbon Hydrates.....Apr. 115
Ira C. Bechtold

Design of Piping
Fundamentals of Refinery Piping Design, Part I . . . Expansion and Contraction.....Jan. 19
Alois Cibulka
Fundamentals of Refinery Piping Design, Part II . . . Anchors and Supports.....Feb. 45
Fundamentals of Refinery Piping Design, Part III . . . Dimensions and Strength of Piping.....Mar. 84
Dr. Alois Cibulka

Distillation
Multicomponent Distillation, A New Graphical Method of Solution.....Aug. 240
C. D. Shiah
Multicomponent Distillation, Approximate Method for the Estimation of Concentration Gradient of Each Component Along the Plates.....Sept. 261
C. D. Shiah

Economics
Oil Demand to Rise Further Unless War Interferes.....Jan. 90
L. J. Logan
Stocks Reduced Under War Demand.....Feb. 92
L. J. Logan
Little Chance of Overcoming East Coast Shortage.....Mar. 84
Barges Offer Partial Solution to East Coast Oil Shortage..Apr. 84
L. J. Logan
Fuel Consumption in Refining.....Apr. 130
Oil in the War, A Balance Sheet Study to Show Whence We Have Come and Whither We Go.....Aug. 97

Electric Power Generation
Increase in Refinery Power Requirements.....Jan. 28
Robert Haldane

Engine Cooling
Ventilation Prevents Crankcase Sludge Formation.....July 226

Expansion of Piping
Fundamentals of Refinery Piping Design, Part I . . . Expansion and Contraction.....Jan. 19
Alois Cibulka

Evaporation
Evaporation from Gasoline Storage Tanks.....May 147
C. L. Marner
Practical Methods for Storing Volatile Liquids.....July 217
D. E. Larson

Fabrication
Proper Electrodes for Refinery Welding.....Aug. 253
Weldon L. Archer

Page

Fire Protection
Fire Bombs, Their Action and Control.....Apr. 95
Joe L. Risinger
Water Quench for Fire Control.....Apr. 111

Fluid Catalyst Process
Thermofor Catalytic Cracking Process.....Nov. 401
T. P. Simpson, L. P. Evans, C. V. Hornberg and J. W. Payne

Fractionation
Conditioning Raw Natural Gasoline in the Field.....Apr. 112
Vapor-Liquid Equilibria for Hydrocarbons.....May 132
C. D. Shiah
Butane Requirements Demand Efficient Extraction.....May 143
Roy W. Machen
Increasing Recovery of Liquefield Petroleum Gases in Natural Gasoline Plants.....June 176
J. W. Wilson
Multicomponent Distillation.....June 182
C. D. Shiah
Multicomponent Distillation, A New Graphical Method of Solution.....Aug. 240
C. D. Shiah
Multicomponent Distillation, Approximate Method for the Estimation of Concentration Gradient of Each Component Along the Plates.....Sept. 261
C. D. Shiah

Furnaces
More Steam With Minimum Materials.....Sept. 265
Pell W. Foster, Jr.

Gas Density
High Pressure Gas Measurement, Part I, The Density of Natural Gases.....June 164
T. A. Matthews, C. H. Roland and D. L. Katz
High Pressure Gas Measurement, Part II, A Suggested Standard Method for Calculation of High Pressure Gas Measurement.....June 170
D. L. Katz

Gas Measurement
High Pressure Gas Measurement, Part I, The Density of Natural Gases.....June 164
T. A. Matthews, C. H. Roland and D. L. Katz
High Pressure Gas Measurement, Part II, A Suggested Standard Method for Calculation of High Pressure Gas Measurement.....June 170
D. L. Katz

Gas Pressure Calculation
High Pressure Gas Measurement, Part I, The Density of Natural Gases.....June 164
T. A. Matthews, C. H. Roland and D. L. Katz
High Pressure Gas Measurement, Part II, A Suggested Standard Method for Calculation of High Pressure Gas Measurement.....June 170
D. L. Katz

Gasoline
The Physical Constants of Some Hydrocarbons in the Gasoline Boiling Range.....Nov. 372
Cecil E. Boord
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes.....Nov. 377
Frederick D. Rossini, Beveridge J. Mair, Alphonse F. Forziati, Augustus R. Glasgow, Jr., and Charles B. Willingham

Gas Reversion
Continental Plant Designed for Flexible Operation.....Jan. 1

Gasoline Plant Operation
Cabot Carbon Company Sub-Cools Absorption Oil in Two Phases.....Feb. 38
Increasing Recovery of Liquefied Petroleum Gases in Natural Gasoline Plants.....June 176
J. W. Wilson
Automatic Control of Absorption Oil Flow Improves Plant Recovery.....Sept. 271

Heat Exchange
Heat Exchanger Tube Sheet Temperatures.....Mar. 71
Karl A. Gardner
Heat Transfer, Pressure Drop and Fouling Rates of Liquids for Continuous and Noncontinuous Longitudinal Fins.....May 150
A. Y. Gunter and W. A. Shaw
Heat Exchange Allows Increase in Cracking Unit Charge..June 191
Fundamental Data on Heat Exchange.....Dec. 106

Houdry Process
Houdry Catalytic Butadiene Process.....Oct. 359
Thermofor Catalytic Cracking Process.....Nov. 401
T. P. Simpson, L. P. Evans, C. V. Hornberg and J. W. Payne

Hydraulics
Heat Transfer, Pressure Drop, and Fouling Rates of Liquids for Continuous and Noncontinuous Longitudinal Fins.....May 150
A. Y. Gunter and W. A. Shaw
NPSH and the Centrifugal Pump.....July 196
L. Garner
Mechanical Performance of Hot Oil Centrifugal Pumps...Dec. 467
A. J. Stepanoff

Hydrocarbon Research
API Hydrocarbon Research.....Nov. 371
Cecil E. Boord
The Physical Constants of Some Hydrocarbons in the Gasoline Boiling Range.....Nov. 372
Cecil E. Boord
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes.....Nov. 377
Frederick D. Rossini, Beveridge J. Mair, Alphonse F. Forziati, Augustus R. Glasgow, Jr., and Charles B. Willingham
Synthesis and Properties of Hydrocarbons of High Molecular Weight.....Nov. 383
R. W. Schiessler, J. N. Cosby, D. G. Clarke, C. S. Rowland, W. S. Sloatman and C. H. Herr

Page

Hydrocarbon Structure
Hydrocarbon Chemistry for the Refinery Worker....Aug. 227
Paul H. Faust
Hydrocarbon Structure of Petroleum Is Complex....Sept. 357
A. W. Trusty
Instrumentation
Tube Corrosion Held to a Minimum by Continuous Check on Dehydrator Water pH....Jan. 16
J. F. Pfarr and H. A. Blackstone
Instrumentation Improves Operation of Polymerization Unit....June 193
Installation and Maintenance of Control Equipment....July 102
E. H. Alexander
Isobutylene
Storage and Handling of Butadiene, Isobutylene, Styrene, and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Robert M. Stuchell
Isomerization
Continental Plant Designed for Flexible Operation....Jan. 1
Hydrocarbon Chemistry for the Refinery Worker....Aug. 227
Paul H. Faust
Laboratory
Examination of Used Crankcase Oil....Apr. 107
L. L. Davis
Ultraviolet Light and Gasoline Testing....Apr. 135
Jack De Ment
Photochemistry in Petroleum Technology....July 206
Jack De Ment
Laboratory Control Reduces Refinery Corrosion....Aug. 250
A. W. Trusty
Laboratory Analysis
Investigation of the Aromatic Portion of Light Oil Fractions....Mar. 75
E. A. Robinson
Photochemistry in Petroleum Technology....July 206
Jack De Ment
Laboratory Methods
Research . . . Its Role in Petroleum Chemical Progress....Oct. 353
Liquefied Petroleum Gas
Liquefied Petroleum Gas....Feb. 93
G. G. Oberfell
Increasing Recovery of Liquefied Petroleum Gases in Natural Gasoline Plants....June 176
J. W. Wilson
Density of Liquefied Petroleum Gas Hydrocarbons, Their Mixtures and Three Natural Gasolines....Sept. 274
B. R. Carney
Lubricants
Examination of Used Crankcase Oil....Apr. 107
L. L. Davis
Established Processes Make Aviation Lubricants....Oct. 343
George F. Fitzgerald
Lubricating Oils
Changes Occurring in Oils and Engines from Use....Feb. 51
Frank A. Suess, H. C. Baldwin, W. A. Jones and Bert H. Lincoln
Lubricating Oil Manufacture
Investigation of the Aromatic Portion of Light Oil Fractions....Mar. 75
E. A. Robinson
Lubrication
Ventilation Prevents Crankcase Sludge Formation....July 226
Maintenance
Paint Programs to Prevent Corrosion and Evaporation Losses....Mar. 90
Paul L. Lotz
Making the Refinery Weld....Apr. 119
Weldon L. Archer
Conservation of Welding Electrode Vital to War Effort....May 98
Clayton B. Herrick
Are You Wasting Oxyacetylene?....June 88
G. V. Slottman
Design and Installation of Steel Tank Bottoms by Arc Welding....June 189
E. C. Woolman
Installation and Maintenance of Control Equipment....July 102
E. H. Alexander
Continuous Salvage Feeds the Warehouse and the Scrap Pile....July 201
Metallizing to Prolong Life of Equipment....Aug. 246
Joe E. Young, Sr.
Simple, Efficient Platform for Pipe Bending....Aug. 249
Proper Electrodes for Refinery Welding....Aug. 253
Weldon L. Archer
Keep Your Arc Welders Welding....Sept. 283
R. F. Wyer
Corrosion Protection of Storage Tanks....Nov. 417
F. L. Newcomb, C. F. Kelly and E. S. Dixon
Boiler Plant Operation and Care....Dec. 451
Roy W. Machen
Installation and Servicing of Pumps and Compressors in Refining Service....Dec. 456
J. F. Rollins
Maintenance Shop Prolongs Meter Usefulness....Dec. 463
Measurement
Hourly Orifice Meter Coefficients for Four-Inch Plates....May 92
Hourly Orifice Meter Coefficients for Six-Inch Plates....May 94
Hourly Orifice Meter Ccefficients for Eight-Inch Plates....May 96
Mercaptan Removal
Mercaptans Removed Prior to Doctor Treating....Apr. 103
Mercaptan Reduction and Doctor Treating Combined....June 185
Critical Analysis of Sweetening Processes and Mercaptan Removal....Nov. 408
John Happel, S. P. Cauley and H. S. Kelly
Metallurgy
Welding Grooves in Refinery Practice....Feb. 42
Weldon L. Archer
Making the Refinery Weld....Apr. 119
Weldon L. Archer
Role of Chromium in Steels for Cracking-Still Tubes....June 189
C. L. Clark
Metallizing to Prolong Life of Equipment....Aug. 246
Joe E. Young, Sr.
Metallurgical Requirements in Butadiene Manufacture....Oct. 339
J. V. Hightower

Page

Metering
High Pressure Gas Measurement, Part I. The Density of Natural Gases....June 164
T. A. Matthews, C. H. Roland and D. L. Katz
High Pressure Gas Measurement, Part II. A Suggested Standard Method for Calculation of High Pressure Gas Measurement....June 170
D. L. Katz
Meters
Maintenance Shop Prolongs Meter Usefulness....Dec. 463
Meters, Orifice
Hourly Orifice Meter Coefficients for Four-Inch Plates....May 92
Hourly Orifice Meter Coefficients for Six-Inch Plates....May 94
Hourly Orifice Meter Coefficients for Eight-Inch Plates....May 96
Mixing
The Role of Blending in Production of Aviation Motor Fuel....Jan. 9
E. S. Bissell
Motor Fuels
Post-War Gasoline....Oct. 349
Graham Edgar
Natural Gas
Natural Gas as a Raw Material in the Production of Synthetic Ammonia....Mar. 63
Frank H. Dotterweich
Hydrocarbon Hydrates....Apr. 115
Ira C. Bechtold
Reduction of Metallic Ores by Natural Gas....May 136
Frank H. Dotterweich
The Testing of High-Pressure Gases....June 94
C. H. Gee
Natural Gas and Natural Gasoline in the War Effort....Nov. 414
E. Holley Poe
Natural Gasoline
Conditioning Raw Natural Gasoline in the Field....Apr. 112
Importance of Butane in This War....May 127
R. L. Huntington
Butane Requirements Demand Efficient Extraction....May 143
Roy W. Machen
Natural Gas and Natural Gasoline in the War Effort....Nov. 414
E. Holley Poe
Chemical Utilization of Natural Gas and Natural Gasoline Hydrocarbons by Oxidation....Dec. 439
Hooper Linford
Compression Gasoline Recovery Coupled With Pressure Maintenance....Dec. 473
Natural Rubber
Synthetic and Natural Rubbers....Oct. 295
Dr. H. L. Trumbull
Chemistry Converted Rubber Into Usable Material....Oct. 310
Octane Rating
Revised Cracking Technique Increases Octane Rating of Michigan Distillate....Feb. 43
Painting
Paint Programs to Prevent Corrosion and Evaporation Losses....Mar. 90
Patents
Digest of United States Patents, Production and Polymerization of Butadiene and Styrene from Petroleum Products to Rubber Line Materials....Oct. 355
Heinz Heinemann and O. T. Aepli
pH Determination
Tube Corrosion Held to a Minimum by Continuous Check on Dehydrator Water pH....Jan. 16
J. F. Pfarr and H. A. Blackstone
Photochemistry
Ultraviolet Light and Gasoline Testing....Apr. 135
Jack De Ment
Photochemistry in Petroleum Technology....July 206
Jack De Ment
Piping
Fundamentals of Refinery Piping Design—Part I . . . Expansion and Contraction....Jan. 19
Alois Cibulka
Fundamentals of Refinery Piping Design—Part II . . . Anchors and Supports....Feb. 46
Dr. Alois Cibulka
Fundamentals of Refinery Piping Design—Part III . . . Dimensions and Strength of Piping....Mar. 84
Dr. Alois Cibulka
Fundamentals of Refinery Piping Design—Part IV . . . Flow and Miscellany....Apr. 123
Dr. Alois Cibulka
Plant Design
Continental Plant Designed for Flexible Operation....Jan. 1
Fundamentals of Refinery Piping Design—Part IV . . . Flow and Miscellany....Apr. 123
Dr. Alois Cibulka
Plant Design Maintenance
Wartime Plant Design....Nov. 436
Max B. Miller
Plant Operation
Conditioning Raw Natural Gasoline in the Field....April 112
Importance of Butane in This War....May 127
R. L. Huntington
Condensation Combined With Water Treating....May 131
Butane Requirements Demand Efficient Extraction....May 143
Roy W. Machen
Auxiliary Track for Chain Hoist....May 146
Problems in Alkylation Plant Operation....July 193
L. M. Kenny
Boiler Plant Operation and Care....Dec. 451
Roy W. Machen
Compression Gasoline Recovery Coupled With Pressure Maintenance....Dec. 473
Plant Protection
Deceiving the Bomber and Anticipating the Saboteur....May 139
Plant Yields
Looking Forward in Refining....Nov. 434
Bruce K. Brown
Polymerization
Instrumentation Improves Operation of Polymerization Unit....June 193
Hydrocarbon Chemistry for the Refinery Worker....Aug. 227
Paul H. Faust

Page

Polymerization of Rubber Ingredients
Synthetic and Natural Rubbers....Oct. 295
Dr. H. L. Trumbull
Chemistry of Synthetic Rubber....Oct. 313
Special Purpose Synthetic Rubbers; Their Development and Applications....Oct. 333
F. M. Andrews

Power Costs
Increase in Refinery Power Requirements....Jan. 23
Robert Haldane

Processing of Rubber Ingredients
Synthetic Rubber and the Petroleum Industry....Oct. 289
Dr. M. B. Hopkins
More Steam With Minimum Materials....Sept. 365
Pell W. Foster, Jr.

Pumps
NPSH and the Centrifugal Pump....July 196
L. H. Garner
Installation and Servicing of Pumps and Compressors in Refining Service....455
J. F. Rollins
Mechanical Performance of Hot Oil Centrifugal Pumps....Dec. 467
A. J. Stepanoff

Reflux Ratio
Multicomponent Distillation....June 182
C. D. Shiah

Refrigeration
Cabot Carbon Company Sub-Cools Absorption Oil in Two Phases....Feb. 38

Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Robert M. Stucheli

Research
Research . . . Its Role in Petroleum Chemical Progress....Oct. 253

Retrograde Condensation
Molecular Explanation of Retrograde Condensation....Feb. 40
Ralph F. Nielsen

Sabotage
Fire Bombs, Their Action and Control....Apr. 95
Joe L. Risinger
Deceiving the Bomber and Anticipating the Saboteur....May 139

Safety
Protection of Industrial Plants and Public Buildings....Jan. 96
In Case of Bombing....Feb. 36
Fire Bombs, Their Action and Control....Apr. 95
Joe L. Risinger
Water Quench for Fire Control....Apr. 111
Deceiving the Bomber and Anticipating the Saboteur....May 139
No Man Has a Right to Practice Negligence....June 92
Otto Peters, Sr.
Efficiency—Get It With Safety....Sept. 104
J. B. Harris

Salvage
Continuous Salvage Feeds the Warehouse and the Scrap Pile..July 201
Simple, Efficient Platform for Pipe Bending....Aug. 249

Sampling
NGAA Begins Tests for Standardising Condensate Well Sampling....May 106

Sources of Butadiene
Synthetic Rubber and the Petroleum Industry....Oct. 289
Dr. M. B. Hopkins

Sources of Rubber Ingredients
Synthetic and Natural Rubbers....Oct. 295
Dr. H. L. Trumbull

Sources of Styrene
Synthetic Rubber and the Petroleum Industry....Oct. 289
Dr. M. B. Hopkins

Steam Power
Increase in Refinery Power Requirements....Jan. 23
Robert Haldane

Storage
Evaporation from Gasoline Storage Tanks....May 147
C. L. Marner
Practical Methods for Storing Volatile Liquids....July 217
D. E. Larson
Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Robert M. Stucheli
Corrosion Protection of Storage Tanks....Nov. 417
F. L. Newcomb, C. F. Kelly and E. S. Dixon

Styrene
Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Herbert M. Stucheli

Sweetening
Critical Analysis of Sweetening Processes and Mercaptan Removal....Nov. 406
John Happel, S. P. Cauley and H. S. Kelly

Synthesis
Natural Gas as a Raw Material in the Production of Synthetic Ammonia....Mar. 63
Frank H. Dotterweich
Synthetic Chemicals from Natural Gas....Nov. 136
Dr. Gustav Egloff

Synthetic Rubber
Synthetic Rubber . . . Problem and an Opportunity....Mar. 68
J. V. Hightower

Page

Butadiene Calls for Few Departures in Equipment or Processing....Apr. 101
J. V. Hightower
History and Prospects of Synthetic Rubber....Apr. 108
Standard Oil Company (N.J.) Memorandum Reviews Rubber Patents....July 128
Synthetic Rubber and the Petroleum Industry....Oct. 289
Dr. M. B. Hopkins
Rubber Administrator to Follow Committee Recommendations....Oct. 294
Synthetic and Natural Rubbers....Oct. 295
Dr. H. L. Trumbull
Special Purpose Synthetic Rubbers; Their Development and Applications....Oct. 333
F. M. Andrews
Bibliography of Synthetic Rubber References to American Publications....Oct. 335
Bradford A. Osborne
Metallurgical Requirements in Butadiene Manufacture....Oct. 339
J. V. Hightower
Digest of United States Patents, Production and Polymerization of Butadiene and Styrene from Petroleum Products to Rubber Line Materials....Oct. 365
Heinz Heinemann and O. T. Aepli
Three Industries Combine Knowledge and Technique to Provide Synthetic Rubber....Oct. 361
R. P. Dinsmore
Chemistry of Synthetic Rubber....Nov. 144

Synthetic Rubber Chemistry
Chemistry of Synthetic Rubber....Oct. 313

Synthetic Rubber History
Notes on the History of Synthetic Rubber....Oct. 305
L. F. Marek

Tankage
Design and Installation of Steel Tank Bottoms by Arc Welding....June 189
E. G. Woolman
Practical Methods for Storing Volatile Liquids....July 217
D. E. Larson
Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile....Oct. 321
James B. Garner, Ludwig Adams and Robert M. Stucheli
Corrosion Protection of Storage Tanks....Nov. 417
F. L. Newcomb, C. E. Kelly and E. S. Dixon

Testing
Examination of Used Crankcase Oil....Apr. 107
L. L. Davis
Ultraviolet Light and Gasoline Testing....Apr. 125
Jack De Ment

Topping
Continental Plant Designed for Flexible Operation....Jan. 1

Towers
Multicomponent Distillation....June 182
C. D. Shiah

Transportation
Barges Offer Partial Solution to East Coast Oil Shortage....Apr. 84
L. J. Logan

Treating—Chemical
Mercaptans Removed Prior to Doctor Treating....Apr. 103
Mercaptan Reduction and Doctor Treating Combined....June 185
Critical Analysis of Sweetening Processes and Mercaptan Removal....Nov. 406
John Happel, S. P. Cauley and H. S. Kelly

Treating—Clay
Pilot Plant Study of the Gray Clay Treating Process....Dec. 447
Dr. A. W. Cobb and L. Carlson

Treating—Doctor
Mercaptan Reduction and Doctor Treating Combined....June 185

Treating—Water
Increasing Production With Clean Condensers....Aug. 243
C. L. Wedell and W. B. Borst

Vacuum
Vacuum Recovery of Penetration Asphalt....Apr. 122

Vapor-Liquid Equilibria
Vapor-Liquid Equilibria for Hydrocarbons....May 132
C. D. Shiah

Water Treating
Condensation Combined With Water Treating....May 131

Welding and Cutting
Welding Grooves in Refinery Practice....Feb. 48
Weldon L. Archer
Making the Refinery Weld....Apr. 119
Weldon L. Archer
Conservation of Welding Electrode Vital to War Effort....May 99
Clayton B. Herrick
Are You Wasting Oxyacetylene?....June 88
G. V. Slottman
Design and Installation of Steel Tank Bottoms by Arc Welding....June 189
E. G. Woolman
Proper Electrodes for Refinery Welding....Aug. 253
Weldon L. Archer
Keep Your Arc Welders Welding....Sept. 283
R. F. Wyer

Well Testing
The Testing of High-Pressure Gases....June 94
C. H. Gee
NGAA Begins Tests for Standardizing Condensate Well Sampling....May 106

Monthly Editorial Feature

The Look Box

Page

The Look Box....Jan. 49 and 103
The Look Box....Feb. 57 and 107
The Look Box....Mar. 49 and 99
The Look Box....Apr. 49 and 101
The Look Box....May 57 and 119
The Look Box....June 51 and 103
The Look Box....July 65 and 111
The Look Box....Aug. 65 and 115
The Look Box....Sept. 65 and 107
The Look Box....Oct. 115 and 375
The Look Box....Nov. 65 and 151
The Look Box....Dec. 67 and 139

Plant Activities

Plant Activities....Jan. 111
Plant Activities....Feb. 121

Page

Plant Activities ..... Mar. 116
Plant Activities ..... Apr. 140
Plant Activities ..... May 146

Science and Technology

Science and Technology ..... Jan. 112
Science and Technology ..... Feb. 134
Science and Technology ..... Mar. 118
Science and Technology ..... Apr. 145
Science and Technology ..... May 148
Science and Technology ..... June 136
Science and Technology ..... July 132
Science and Technology ..... Aug. 140
Science and Technology ..... Sept. 134
Science and Technology ..... Oct. 384
Science and Technology ..... Nov. 180
Science and Technology ..... Dec. 154

New Equipment

New Equipment ..... Jan. 124
New Equipment ..... Feb. 136
New Equipment ..... Mar. 130
New Equipment ..... Apr. 153
New Equipment ..... May 158
New Equipment ..... June 146
New Equipment ..... July 142
New Equipment ..... Aug. 160
New Equipment ..... Sept. 148
New Equipment ..... Oct. 402
New Equipment ..... Nov. 196
New Equipment ..... Dec. 170

Catalogs and Bulletins

Catalogs and Bulletins ..... Jan. 134
Catalogs and Bulletins ..... Feb. 150
Catalogs and Bulletins ..... Mar. 142
Catalogs and Bulletins ..... Apr. 166
Catalogs and Bulletins ..... May 173
Catalogs and Bulletins ..... June 158
Catalogs and Bulletins ..... July 158
Catalogs and Bulletins ..... Aug. 162
Catalogs and Bulletins ..... Sept. 157

Page

Catalogs and Bulletins ..... Oct. 417
Catalogs and Bulletins ..... Nov. 206
Catalogs and Bulletins ..... Dec. 181

Business Notes

Business Notes ..... Jan. 130
Business Notes ..... Feb. 142
Business Notes ..... Mar. 136
Business Notes ..... Apr. 160
Business Notes ..... May 166
Business Notes ..... June 154
Business Notes ..... July 150
Business Notes ..... Aug. 156
Business Notes ..... Sept. 164
Business Notes ..... Oct. 412
Business Notes ..... Nov. 200
Business Notes ..... Dec. 174

Digest of Foreign Literature

Digest of Foreign Literature ..... April 132
Digest of Foreign Literature ..... May 134
Digest of Foreign Literature ..... June 132

Digest of United States Patents

Digest of United States Patents ..... July 124
Digest of United States Patents ..... Aug. 176
Digest of United States Patents ..... Oct. 356
Digest of United States Patents ..... Nov. 176

Advertisers' Index

Advertisers' Index ..... Jan. 136
Advertisers' Index ..... Feb. 152
Advertisers' Index ..... Mar. 143
Advertisers' Index ..... Apr. 188
Advertisers' Index ..... May 176
Advertisers' Index ..... June 160
Advertisers' Index ..... July 160
Advertisers' Index ..... Aug. 164
Advertisers' Index ..... Sept. 160
Advertisers' Index ..... Oct. 419
Advertisers' Index ..... Nov. 208
Advertisers' Index ..... Dec. 184

AUTHOR INDEX

Page

ADAMS, LUDWIG
Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile ..... Oct. 321

AEPLI, O. T.
Digest of United States Patents . . . Production and Polymerization of Butadiene and Styrene from Petroleum Products to Rubber Line Materials ..... Oct. 355

ALEXANDER, E. H.
Installation and Maintenance of Control Equipment . . . July 102

ANDREWS, F. M.
Special Purpose Synthetic Rubbers; Their Development and Applications ..... Oct. 332

ARCHER, WELDON L.
Welding Grooves in Refinery Practice ..... Feb. 48
Making the Refinery Weld ..... Apr. 119
Proper Electrodes for Refinery Welding ..... Aug. 253

BALDWIN, H. C.
Changes Occurring in Oils and Engines From Use ..... Feb. 51

BARTH, EDWIN H.
Asphalt Paving Emulsions Properties, Uses and Tests . . . Aug. 232

BECHTOLD, IRA C.
Hydrocarbon Hydrates ..... Apr. 115

BISSELL, E. S.
The Role of Blending in Production of Aviation Motor Fuel ..... Jan. 9

BLACKSTONE, H. A.
Tube Corrosion Held to a Minimum by Continuous Check on Dehydrator Water pH ..... Jan. 16

BOORD, CECIL E.
API Hydrocarbon Research ..... Nov. 371
The Physical Constants of Some Hydrocarbons in the Gasoline Boiling Range ..... Nov. 372

BORST, W. B.
Increasing Production With Clean Condensers ..... Aug. 243

BOYD, WILLIAM R., JR.
Defense Efforts Push Oil to Record Levels During 1941 . . Jan. 82

BROWN, BRUCE K.
Looking Forward in Refining ..... Nov. 434

CARNEY, B. R.
Density of Liquefied Petroleum Gas Hydrocarbons, Their Mixtures and Three Natural Gasolines ..... Sept. 274

CAULEY, S. P.
Critical Analysis of Sweetening Processes and Mercaptan Removal ..... Nov. 406

CIBULKA, DR. ALOIS
Fundamentals of Refinery Piping Design—Part I . . . Expansion and Contraction ..... Jan. 19
Fundamentals of Refinery Piping Design—Part II . . . Anchors and Supports ..... Feb. 46
Fundamentals of Refinery Piping Design—Part IV . . . Flow and Miscellany ..... Apr. 123

CLARK, C. L.
Role of Chromium in Steels for Cracking-Still Tubes . . June 159

CLARKE, D. G.
Synthesis and Properties of Hydrocarbons of High Molecular Weight ..... Nov. 383

COBB, DR. A. W.
Pilot Plant Study of the Gray Clay Treating Process . . . Dec. 447

Page

COSBY, J. N.
Synthesis and Properties of Hydrocarbons of High Molecular Weight ..... Nov. 383

DAVIS, L. L.
Examination of Used Crankcase Oil ..... Apr. 107

DE MENT, JACK
Ultraviolet Light and Gasoline Testing ..... Apr. 125
Photochemistry in Petroleum Technology ..... July 106

DINSMORE, R. P.
Three Industries Combine Knowledge and Technique to Provide Synthetic Rubber ..... Oct. 361

DIXON, B. S.
Corrosion Protection of Storage Tanks ..... Nov. 417

DOTTERWEICH, FRANK H.
Natural Gas as a Raw Material in the Production of Synthetic Ammonia ..... Mar. 63
Reduction of Metallic Ores by Natural Gas ..... May 135

EDGAR, GRAHAM
Post-War Gasoline ..... Oct. 349

EGLOFF, DR. GUSTAV
Synthetic Chemicals from Natural Gas ..... Nov. 136

EVANS, L. P.
Thermofor Catalytic Cracking Process ..... Nov. 401

FAUST, PAUL H.
Hydrocarbon Chemistry for the Refinery Worker ..... Aug. 237

FITZGERALD, GEORGE F.
Established Processes Make Aviation Lubricants ..... Oct. 343

FORZIATI, ALPHONSE F.
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes ..... Nov. 377

FOSTER, PELL W.
More Steam With Minimum Materials ..... Sept. 265

GARDNER, KARL A.
Heat Exchanger Tube Sheet Temperatures ..... Mar. 71

GARNER, L. H.
NPSH and the Centrifugal Pump ..... July 196

GARNER, JAMES B.
Storage and Handling of Butadiene, Isobutylene, Styrene and Acrylonitrile ..... Oct. 321

GARY, WRIGHT W.
The Refinery of the Future ..... Oct. 303

GEE, C. H.
The Testing of High-Pressure Gases ..... June 94

GLASGOW, AUGUSTUS R., JR.
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes ..... Nov. 377

GUNTER, A. Y.
Heat Transfer, Pressure Drop and Fouling Rates of Liquids for Continuous and Noncontinuous Longitudinal Fins ..... May 150

HALDANE, ROBERT
Increase in Refinery Power Requirements ..... Jan. 28

HAPPEL, JOHN
Critical Analysis of Sweetening Processes and Mercaptan Removal ..... Nov. 406

Page

HARRIS, J. M.
Efficiency—Get It With Safety....Sept. 104

HERR, C. H.
Synthesis and Properties of Hydrocarbons of High Molecular Weight....Nov. 383

HERRICK, CLAYTON B.
Conservation of Welding Electrode Vital to War Effort..May 99

HIGHTOWER, J. V.
Synthetic Rubber . . . Problem and an Opportunity....Mar. 68
Butadiene Calls for Few Departures in Equipment or Processing....Apr. 101
Thermofor Catalytic Cracking Process Announced....June 162
Metallurgical Requirements in Butadiene Manufacture..Oct. 339

HOPKINS, DR. M. B.
Synthetic Rubber and the Petroleum Industry....Oct. 289

HORNBERG, C. V.
Thermofor Catalytic Cracking Process....Nov. 401

HUNTINGTON, R. L.
Importance of Butane in This War....May 127

JONES, BRUCE
Decoking Petroleum Residues....Feb. 31

JONES, W. A.
Changes Occurring in Oils and Engines From Use....Feb. 51

KATZ, D. L.
High Pressure Gas Measurement—Part I . . .
The Density of Natural Gases....June 164
High Pressure Gas Measurement—Part II . . . A Suggested Standard Method for Calculation of High Pressure Gas Measurement....June 170

KELLY, C. F.
Corrosion Protection of Storage Tanks....Nov. 417

KELLY, H. S.
Critical Analysis of Sweetening Processes and Mercaptan Removal....Nov. 406

KENNY, L. M.
Problems in Alkylation Plant Operation....July 193

LARSON, D. E.
Practical Methods for Storing Volatile Liquids....July 217

LINCOLN, BERT H.
Changes Occurring in Oils and Engines From Use....Feb. 51

LINFORD, HOOPER
Chemical Utilization of Natural Gas and Natural Gasoline Hydrocarbons by Oxidation....Dec. 439

LOGAN, L. J.
Oil Demand to Rise Further Unless War Interferes....Jan. 90
Stocks Reduced Under War Demand....Feb. 92
Barges Offer Partial Solution to East Coast Oil Shortage..Apr. 84

LOTZ, PAUL A.
Paint Programs to Prevent Corrosion and Evaporation Losses....Mar. 90

MACHEN, ROY W.
Butane Requirements Demand Efficient Extraction....May 143
Boiler Plant Operation and Care....Dec. 451

MAIR, BEVERIDGE J.
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes....Nov. 377

MAREK, L. F.
Notes on the History of Synthetic Rubber....Oct. 305

MARNER, C. L.
Evaporation from Gasoline Storage Tanks....May 147

MATTHEWS, T. A.
High Pressure Gas Measurement—Part I . . .
The Density of Natural Gases....June 164

MILLER, MAX B.
Wartime Plant Design....Nov. 435

MORROW, MORRIS R.
Decoking Petroleum Residues....Feb. 31

NAEVE, ROBERT F.
Notes on the Conversion of California Residuum....Sept. 269

NEWCOMB, F. L.
Corrosion Protection of Storage Tanks....Nov. 417

NIELSEN, RALPH F.
Molecular Explanation of Retrograde Condensation....Feb. 40

OBERFELL, G. G.
Liquefied Petroleum Gas in 1941....Feb. 98

OSBORNE, BRADFORD A.
Bibliography of Synthetic Rubber References to American Publications....Oct. 335

Page

PAYNE, J. W.
Thermofor Catalytic Cracking Process....Nov. 401

PETERS, OTTO, SR.
No Man Has a Right to Practice Negligence....June 92

PFARR, J. F.
Tube Corrosion Held to a Minimum by Continuous Check on Dehydrator Water pH....Jan. 16

POE, E. HOLLEY
Natural Gas and Natural Gasoline in the War Effort...Nov. 414

RISINGER, JOE L.
Fire Bombs, Their Action and Control....Apr. 95

ROBINZON, E. A.
Investigation of the Aromatic Portion of Light Oil Fractions....Mar. 78

ROLAND, C. H.
High Pressure Gas Measurement—Part I . . .
The Density of Natural Gases....June 164

ROLLINS, J. F.
Installation and Servicing of Pumps and Compressors in Refining Service....Dec. 456

ROSSINI, FREDERICK D.
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes....Nov. 377

ROWLAND, C. S.
Synthesis and Properties of Hydrocarbons of High Molecular Weight....Nov. 383

SCHIESSLER, R. W.
Synthesis and Properties of Hydrocarbons of High Molecular Weight....Nov. 383

SHAW, W. A.
Heat Transfer, Pressure Drop, and Fouling Rates of Liquids for Continuous and Noncontinuous Longitudinal Fins....May 150

SHIAH, C. D.
Vapor-Liquid Equilibria for Hydrocarbons....May 132
Multicomponent Distillation....June 182
Multicomponent Distillation, A New Graphical Method of Solution....Aug. 240
Multicomponent Distillation, Approximate Method for the Estimation of Concentration Gradient of Each Component Along the Plates....Sept. 261

SIMPSON, T. P.
Thermofor Catalytic Cracking Process....Nov. 401

SLOATMAN, W. S.
Synthesis and Properties of Hydrocarbons of High Molecular Weight....Nov. 383

SLOTTMAN, G. V.
Are You Wasting Oxyacetylene?....June 88

STEPANOFF, A. J.
Mechanical Performance of Hot Oil Centrifugal Pumps..Dec. 467

STUCHELL, ROBERT M.
Storage and Handling of Butadiene, Isobutylene, Styrene, and Acrylonitrile....Oct. 321

SUESS, FRANK A.
Changes Occurring in Oils and Engines from Use....Feb. 51

SWEARINGEN, JUDSON S.
Decoking Petroleum Residues....Feb. 31

TRUMBULL, DR. H. L.
Synthetic and Natural Rubbers....Oct. 295

TRUSTY, A. W.
Laboratory Control Reduces Refinery Corrosion....Aug. 250
Hydrocarbon Structure of Petroleum Is Complex....Sept. 257

WEDELL, C. L.
Increasing Production With Clean Condensers....Aug. 243

WILLINGHAM, CHARLES B.
Method for Analyzing the Gasoline Fraction of Petroleum, With Preliminary Results on East Texas and Oklahoma Crudes....Nov. 377

WILSON, J. W.
Increasing Recovery of Liquefied Petroleum Gases in Natural Gasoline Plants....June 176

WOOLMAN, E. G.
Design and Installation of Steel Tank Bottoms by Arc Welding....June 189

WYER, R. F.
Keep Your Arc Welders Welding....Sept. 283

YOUNG, JOE E., SR.
Metallizing to Prolong Life of Equipment....Aug. 246

COMPANY AND PLANT INDEX

Page

Ashland Oil & Refining Company, Tube Corrosion Held to a Minimum by Continuous Check on Dehydrator Water pH....Jan. 16

Cabot Carbon Company, Estes Gasoline Plant, Ward County, Texas, Cabot Carbon Company Sub-Cools Absorption Oil in Two Phases....Feb. 38

Canton Refining Company, Increasing Production With Clean Condensers....Aug. 243

Continental Oil Company, Continental Plant Designed for Flexible Operation....Jan. 1

Continental Oil Company No. 1 Gasoline Plant, K-M-A Field, Condensation Combined With Water Treating...May 131

General Petroleum Corporation, Automatic Control of Absorption Oil Flow Improves Plant Recovery....Oct. 271

Globe Oil & Refining Company, McPherson, Kansas, Mercaptans Removed Prior to Doctor Treating....Apr. 103

Mid-West Refineries, Inc., Alma, Revised Cracking Technique Increases Octane Rating of Michigan Distillate....Feb. 43

Page

National Oil Products Company, Industrial Division, Asphalt Paving Emulsions Properties, Uses and Tests....Aug. 232

Petroleum Conversion Corporation, Adaptation of Thermal Cracking to Butadiene Manufacture....Oct. 365

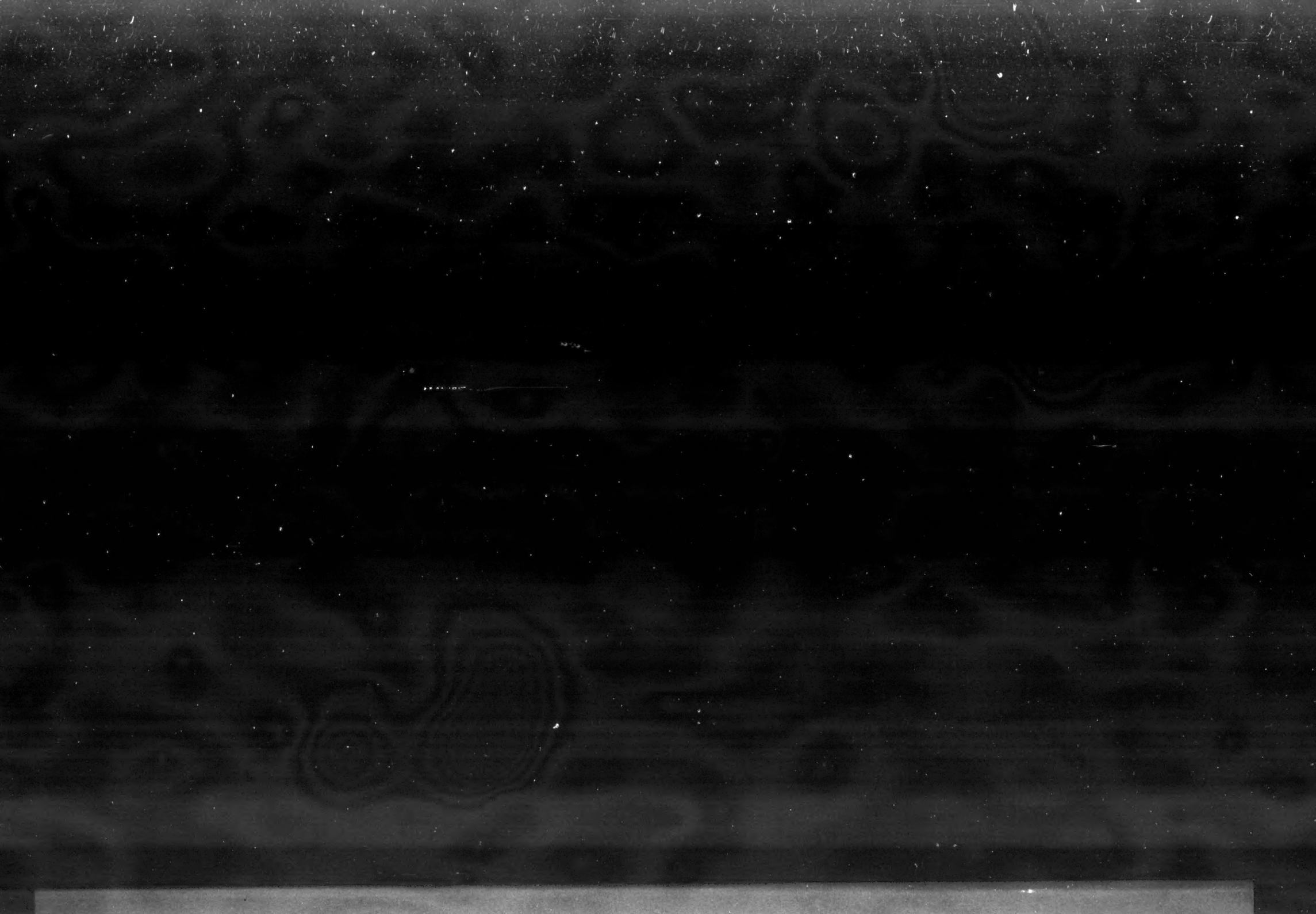
Shell Oil Company, Inc., Increase in Refinery Power requirements....Jan. 22

Shell Oil Company, Inc., Maintenance Shop Prolongs Meter Usefulness....Dec. 463

Socony-Vacuum Oil Company, Fire Bombs, Their Action and Control....Apr. 95

Sun Oil Company, Houdry Catalytic Butadiene Process....Oct. 359

Trinidad Leaseholds, Ltd., Problems in Alkylation Plant Operation....July 193

Tung Li Oil Works, Chungking, China, Vapor-Liquid Equilibria for Hydrocarbons....May 132

Valley Refining Company, Roswell, New Mexico, Vacuum Recovery of Penetration Asphalt....Apr. 122